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ABSTRACT

This report describes conditions related to California's growth, diversity and economic development; assesses the current status of California's educational systems for students with special needs; suggests a conceptual framework for the employment preparation of children and youth; and specifies strategies for using the special needs program of the Career-Vocational Education Division as a leverage point for promoting broad change in vocational education. The report argues for a comprehensive view of quality in career-vocational education consistent with the state's needs as the first truly multicultural state in the nation. Finally, the report examines the role of career-vocational education programs in ensuring valued social roles for children with special needs. (74 endnote references.) (KC)

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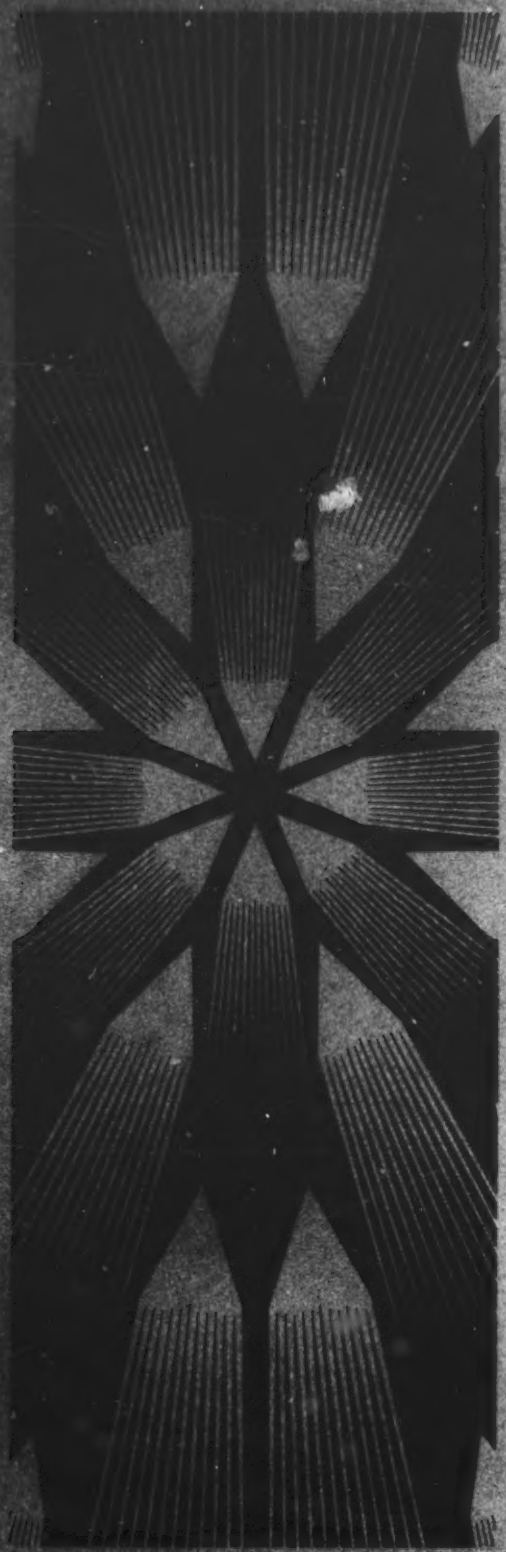

Preparing Them All

Future Directions of Career-Vocational Preparation Services for California Students with Special Needs

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A report prepared by the Vocational Education Resource System and presented to the Career-Vocational Preparation Division of the California State Department of Education

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PREPARING THEM ALL

Future Directions of
Career-Vocational Preparation Services for
California Students with Special Needs

Vocational Education Resource System
California Institute on Human Services
Sonoma State University
Rohnert Park, California 94928

June, 1989

A report prepared by the Vocational Education Resource System and presented to the Career-Vocational Education Division of the California State Department of Education.

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Executive Summary

The special needs program of the Career-Vocational Education Division, California State Department of Education, is a comparatively small, but critical component of the California vocational education system. The program focuses on the needs of students who are academically and economically disadvantaged, limited-English proficient, or handicapped. In a very real sense, the program is a microcosm of the social and educational issues that the State of California must address.

Three critical issues facing California are economic development, growth, and diversity. In the past, California's population growth was made possible by a balanced and ever-expanding economy. California has been blessed by a robust economy supported by a diversity of industries. Although the economy remains diversified, rapid changes in the economy pose potential threats to its well-being, e.g., a possible decline in the defense industry, reductions in exports, automation of manufacturing, worldwide competition, etc. An essential element for the maintenance and expansion of the California economy is a well educated and well trained work force.

Not only is the California economy continuing to change but also the demographics continue to change. In the past, California's population has included a high proportion of working adults. Growth since 1980 has shown large increases in the number of children and older adults. Public services will be strained to meet the expanded needs of the young and the old.

California's population increase poses significant challenges. These problems are made more complex by the fact that its growth is resulting in an increasingly heterogeneous population. Today, a majority of elementary school students are racial-ethnic minorities and the proportion of minorities continues to increase due to differential birth rates and immigration. The diversity of the state can be a strength but it must be recognized that diversity requires new responses from public institutions. Schools that were designed for majority Anglo populations must realize the need for meeting varied learning styles, for assuring the baseline levels of language development necessary for all subsequent learning, and for preparing students with an expanded range of knowledge and skills necessary for full participation in an ever-changing, technologically sophisticated, information society.

While educational systems cannot provide the solutions to these problems by themselves, they can play an important role in the development of essential human resources for a future society. The Career-Vocational Education Division's special needs program provides a laboratory for developing strategies, programs and services which keep greater numbers of youth in the educational and vocational mainstream. This report recommends that the division use the special needs program as a means of facilitating the continued improvement and redesign of all

vocational education programs. Specifically, this report recommends that the division implement a wide range of strategies which are in keeping with the following program components:

- Activities which increase vocational educators' awareness of differential access, participation and achievement of special needs populations.
- Activities which increase educators' and others' general understanding of the factors which inhibit or limit participation or achievement of special needs groups.
- Activities which provide educators with information about exemplary programs and practices useful for overcoming barriers to the participation and achievement of special needs groups.
- Activities which train vocational educators with the knowledge and skills needed to more effectively serve students with special needs.
- Activities which showcase and reinforce successful efforts or programs to increase vocational education opportunities for special needs populations.

Changes in educational systems and the larger society are needed if California's population is to maintain its productivity and well-being. If California's future is to be bright, it is essential that state and local leaders develop a new understanding of the scope of current and future needs and foster a new level of commitment towards investing in California's future. As California moves to a new level of heterogeneity, it is essential that citizens move beyond the passive culture of coexistence which has characterized the recent past to the development of a common culture consistent with the collective well-being of Californians.

This report describes conditions related to California's growth, diversity and economic development, assesses the current status of California's educational systems for students with special needs, suggests a conceptual framework for the employment preparation of children and youth, and specifies strategies for utilizing the special needs program of the Career-Vocational Education Division as a leverage point for promoting broad scale change in vocational education. This report argues for a comprehensive view of quality career-vocational education consistent with our needs as the first truly multicultural state in the nation. While the ultimate attainment of these goals extends far beyond the issues of vocational education and depends upon transformations in our society and in the values of individuals, career-vocational preparation programs can play a strong role in assuring valued social roles for children with special needs. This report examines this potential role.

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Chapter I

Search for Vision and Directions for Career-Vocational Education Programs

> Effective, rapid evolutionary change, in which no one is guillotined and no one is forced into exile, depends on the cooperation of a large number of those in power with the dispossessed who are seeking power. Margaret Mead, Culture and Commitment

The subject of this report is how vocational education programs serving the needs of special populations -- the handicapped, limited-English proficient groups, economically disadvantaged, and academically disadvantaged -- can be improved to ensure that all children are prepared for full participation in the economic, social, and political activities of California's future society. While the ultimate answers to this question extend far beyond the issues of vocational education and depend upon transformations in our society and in the values of individuals, career-vocational education programs can play a strong role in assuring valued social roles for children with special needs. This report examines this potential role.

Our Changing Economy

A primary consideration in understanding the context of issues involving vocational education special needs programs begins with an understanding of the changing nature of the United States economy. In 1950, the U.S. dominated the world's production system. In 1960, the U.S. provided 35 percent of the world's economic output. By 1980 this figure had fallen to 22 percent. In 1960 almost 22 percent of the world's exports came from the U.S. By 1980, U.S. exports accounted for only 11 percent. The situation has continued to deteriorate. In 1980, the U.S. excess of imports over exports accounted for 36 billion dollars. This excess or trade deficit had increased to $160 billion in 1986.[1]

Much of the change in the U.S. world economic position is the result of technological advances in communications and transportation. The world is becoming closer as the costs of transferring information and goods decreases. Other countries are catching up and developing production systems which successfully compete with the U.S. in many areas.

Shifts in the economy have brought us to the realization that we cannot assume high levels of affluence and growth as a given in our society. We are having to reconsider what we believe to be important and the vision for society which we are willing to pursue. For many Americans, consumption has been a primary life value. Keeping up with the Joneses and securing material wealth have been the organizers for much of our lives. While maintaining a comfortable standard of life may always be part of the American way, we are beginning to realize that attainment of

material goods is a hollow victory without a commitment to family, community and compelling personal goals.

What is at stake is our commitment to the American Dream. In a time of expanded and plentiful resources, our commitment to an equitable and open society -- a society where our children would have greater opportunities than we did -- provided a driving force which bound us together. Today, we face a future of slower growth and difficult economic problems.

There is little question that our nation is drifting toward a two-tiered society consisting of those with plentiful access to resources and those with little access to resources. This drift is evident in the changing structure of jobs, in inequitable educational outcomes and in patterns of wealth among groups in our society. The reasons for this movement to a more class-based society are many, but we are at a watershed point in time in terms of choosing our vision for the future.

Our Changing Population

Developing a vision and a sense of a shared and coherent culture is made more difficult by another transformation in society -- the increasing diversity of our population. The culture of the U.S. has long reflected white, Western European groups and for many, this is the "real" American culture.

The groups that make up the U.S. population have, and continue to become more diverse and reflect greater numbers of citizens from Central and South America and Asia. In 1985, minorities constituted 17 percent of the total U.S. population; by 2020 minorities are expected to comprise 33 percent of the population.[2] The culture and experiences of many of these groups varies considerably from the dominant U.S. culture.

At the same time, changes in treatment philosophy related to individuals with handicapping conditions, and parallel changes in Federal and State laws, have resulted in large numbers of such children in the educational mainstream for the first time. These children often also do not conform to the standards of the general culture.

Culture includes our ways of doing things and the philosophies which underlie our preferences as to how we should do things. Multiple cultures form the political system where agreements are reached as to the principles which should guide society. The process of interaction among groups leads to an understanding and acceptance of other cultures and is essential to the development of a common core culture within a democratic society.

The lack of interaction among groups, a function of housing and economic segregation, makes it difficult to develop a common core culture which binds us together in a commitment to a future vision. Isolation among groups is frequently seen in public schools and the lack of interventions and programs that can truly prepare handicapped and

disadvantaged children to participate in future society. The perpetration of the practices of "sorting" low-income, minority, handicapped, male and female for their expected roles and stations hampers our ability to develop a common core culture.

Our Need for a Common Core Culture

For many, it has been simpler to consider themselves private individuals with little in common. Much of our society espouses the responsibility of the individual without balancing this against the need for social institutions which socialize the young and develop a common culture. America has the choice of hanging onto past images of culture or finding ways to build on the past and capitalize on the strengths of diversity. Individual freedom and responsibility has been a primary value in our society. A paradox not widely understood is that a strong group or community experience that respects individual differences strengthens both individual autonomy and collective security.

The next few years will be a period of testing for the American people. During the past 50 years we have seen at least four dominant sets of values. The 1940s and 1950s were times of strong belief in government and other societal institutions, the goodness (and perhaps superiority) of Americans, our ability to solve problems, and our basic commitment to an open society. The 1960s and early 1970s saw the development of a counterculture that questioned these basic values. The inequities of institutions, the lack of equal opportunities, the impact of the economic system were all brought into question. But this period of questioning gradually led to a period of turning away from societal concerns. People pursued their individual goals and well-being and lost interest in common concerns. A period of narcissism began to characterize many people's lives, particularly the young whose primary energies became devoted to personal security.

Today we seem to be arriving at a culture of co-existence, a culture where action can only result when we find ourselves in a state of crisis. Co-existence describes a tolerance or passive acceptance of other groups that lack any commitment to a development of a common agenda. As a nation we will be tested to see whether the primary vision of the future will be "one of strident individualism (or group vested interests) lacking the idealism and moral conviction necessary to do more than muddle through."[3] While this testing will be apparent throughout the United States, the first and possibly most important test of our ability to develop a vision will be in California and a few other bellweather states where economic and demographic conditions require new responses. Inherent in this testing must be the development of an awareness of the societal issues and the impact of current programs on individual children. This, in turn, must be followed by an analysis of the needs of various groups within the population and the actions necessary to meet their needs. Career-vocational preparation programs should be at the forefront of these analyses.

Much has been written about the need to improve our institutions or make our current institutions do better than what they have done in the past. Others have pointed to a more ambitious goal -- to restructure our institutions in ways which "match" the profound economic, demographic, organizational and cultural changes in our society. This restructuring is not possible without reconsideration of the American Dream and its meaning for a changed society, and a reexamination of our deepest understandings of culture, community, democracy, and our responsibilities to our society. Career-vocational preparation programs must adapt to the changes which are occurring in our society and such services for children with special needs should be viewed as the testing grounds for change agentry.

The Role of Career-Vocational Education Programs

The purpose of this report is to review the context for the issues facing career-vocational education programs in California and to make recommendations for improving and redesigning these programs in ways which will ensure that all children are prepared for valued social roles. The following chapters provide background information on the status and future directions of our economy and population (Chapter II), the nature of public education programs (Chapter III), and the nature of major specialized programs for students with special needs (Chapter IV).

While the problems of special needs populations are complex and extend far beyond classroom walls, vocational educators have an important responsibility in meeting their needs. In Chapter V of this report we recommend specific initiatives which the Career-Vocational Education Division of the California Department of Education should consider in order to better serve children who are in most need of added help.

Chapter II

The Changing California Perspective

> But in California the lights went on all at once
> in a blaze, and they have never been dimmed --
> Carey McWilliams, California: The Great Exception

The Nation State

California has been identified by many as a nation state. It is a great state, a collection of many cultures and for many, symbolic of the good life. If California were a nation, it would exceed 100 other nations in population and 92 in land area.[4]

The geographic size of the State, 800 miles from corner to corner, contributes to its diversity. In 1859 (only nine years after statehood) the state legislature voted to divide California into North and South states. This proposal failed when Congress would not approve it.[5]

California is a state of cities and urban areas. The approximately 26 million residents in California make it the most populous state in the nation. Seven large metropolitan areas with more than one million people account for 78 percent of the state's population. The coastal counties, the first areas developed, remain the places where population is concentrated. During recent years, however, growth has been increased in the inland counties.

One of California's assets is the state's climate which makes possible its diversified economy. Most of California has two distinct seasons: mild wet winters and relatively dry summers. The state includes Mount Whitney, the highest peak in the contiguous United States at 14,495 feet above sea level, and Death Valley, 282 feet below sea level.[6]

California's Robust Economy

The energy of California has been based on a sequence of diverse economic developments. What has remained constant is rapid, revolutionary change, change that has been felt in every sector over a period of time. Carey McWilliams observed:

> "Just as the energies released by the discovery of gold put California into orbit with one mighty blast-off, so it has been kept spinning, faster and faster, by a succession of subsequent, providentially timed discoveries and explosions of one kind or another: the green-gold of lettuce and other produce crops, ...the black gold of oil; motion pictures, tourism, the aerospace industry... California has raced through the familiar evolutionary cycle -- pastoral, agricultural, industrial, post-industrial..."

The diversity of California's economy has insulated the state from many economic shocks and led to the development of a state gross product of over 350 billion dollars. The state's productivity exceeds all but a few of the world's leading nations. Of all the United States, California is the one that could most easily exist alone.[7]

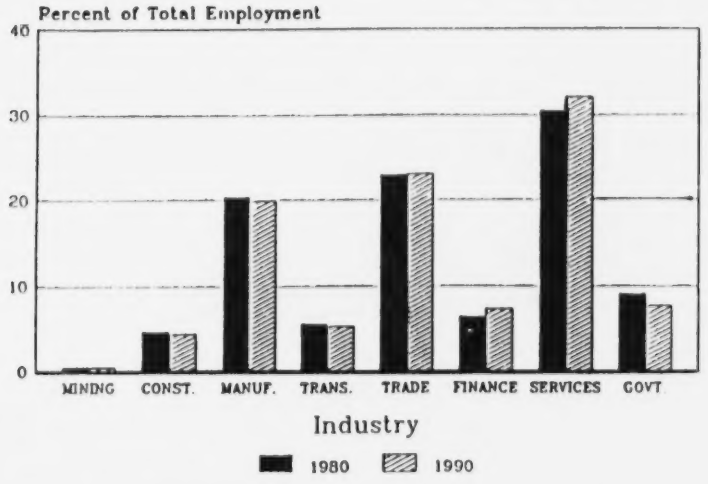
Isolated from the East Coast centers of banking and commerce, and with a large population that is a primary market for products and ideas, California appears to be relatively independent. But it is not independent. Half of California's 101 million acres are owned by the federal government. California is one of five states which receives a majority of the nation's defense contracts creating a $28 billion defense economy for the state. Markets throughout the U.S. are primary outlets for California products.

Overall, the California economy continues to grow. The Research Division of the California Department of Employment Development reported a total of 9,808,900 jobs in 1980 and projects 12,380,890 jobs by 1990, an increase of 26.2 percent.

The structure of California's industries reflects some of the same trends seen nationally. As shown in Figure 1, the primary industry in the state is services. Business, health, education and social services made up 30 percent of the civilian economy in 1980 and are projected to account for 32 percent of it in 1990. These services comprise the civilian economic sector which is projected to provide the greatest number, 981,360, of new jobs during this decade.

Figure 1.

INDUSTRY PROFILE OF CALIFORNIA: 1980 - 1990



Source: Projections of Employment 1980-1990: California Employment Development Department, Sacramento, 1985.

Trade is the second fastest growing civilian sector in terms of absolute employment. Trade will add some 603,230 new jobs which is almost one-fourth of the total absolute employment growth. Wholesale trade will decrease and retail trade will increase at a yearly rate of three percent, nearly twice the rate of wholesale trade. Eating and drinking establishments account for one-third of the increase in retail trade.

Another perspective of the California economy is the types and mix of current and projected jobs. Industry structure determines the nature of available jobs. Clerical workers and professional, technical and kindred jobs comprise the two largest categories of job. By 1980, clerical workers were the largest single occupational group with 2.2 million job holders. A total of 2.8 million clerical jobs are projected for 1990. Growth in professional, technical and kindred jobs will account for about one-fourth of all job growth or about 600,000 new jobs. Elementary and kindergarten teachers will show the largest increase, adding 65,400 more workers. Other high growth jobs include professional nurses, physicians and surgeons, licensed practical nurses, and dental hygienists and assistants.

A third perspective of the California economy is provided by listings of the fastest growing occupations and the largest areas job growth. Occupations with the largest job growth are projected to be secretaries, sales clerks, general clerical, teachers, janitors, cashiers and food service personnel. Table I provides a picture of changing societal needs and demands and the areas of new job opportunities.

Finally, the data available on California employment trends suggests some future changes in the geographic locations of new jobs. It is projected that in the Los Angeles - Long Beach and the San Francisco - Oakland statistical areas, employment will be fairly stable, but other areas such as Anaheim - Santa Ana - Garden Grove, San Diego and San Jose areas will produce rapid growth.

The Changing Workplace

Examination of changes in industries and the occupational categories are useful for giving us a comparison of the past and likely future overall structure of the economy, but also do not provide all the information necessary for critical planning. A popular misconception exists that manufacturing jobs will significantly decline. In fact, the number of manuafacturing jobs is expected to show a moderate increase. More importantly, the complexity of these jobs will dramatically increase.

TABLE 1

CALIFORNIA OCCUPATIONS WITH LARGEST JOB GROWTH:
1980-1990

OCCUPATIONS	CHANGE IN TOTAL EMPLOYMENT (IN THOUSANDS)	PERCENT OF TOTAL JOB GROWTH	PERCENT OF CHANGE
Secretaries	116.3	4.5%	42.7%
Sales Clerks	85.3	3.3	28.7
General Clerk, Office	69.6	2.7	25.3
Teachers, Elem. & Kindergarten	65.4	2.5	31.8
Janitors, Porters, and Cleaners	58.5	2.3	24.2
Cashiers	54.0	2.1	31.9
Food Prep. & Serv. Workers, Fast Food	48.4	1.9	46.1
Sales Representatives, Technical	46.0	1.8	30.2
Waiters & Waitresses	37.8	1.5	21.1
Nurses, Professional	37.5	1.5	38.3
Electrical Engineers	35.6	1.4	55.6
Guards and Doorkeepers	33.7	1.3	46.9
Typists	33.2	1.3	25.4
Accountants and Auditors	33.1	1.3	38.2
Cooks (All)	30.0	1.2	22.6
Electronic and Elec. Technicians	29.0	1.1	46.5
Truck Drivers	28.1	1.1	21.7
Tellers	27.0	1.0	42.0
Systems Analysts	26.5	1.0	83.4
Nurses Aides/Orderlies	25.8	1.0	26.1
Bookkeepers	25.6	1.0	28.5
Store Managers	23.4	0.9	31.9
Stock Clerks	23.0	0.9	25.2
Blue Collar Supervisors	22.8	0.9	20.0
Computer Programmers	22.5	0.9	66.2
Accounting Clerks	21.6	0.8	23.1
Auto Mechanics	21.4	0.8	31.0
Kitchen Helpers	21.2	0.8	24.3
Delivery and Route Workers	20.6	0.8	23.4
Receptionists	20.4	0.8	39.1
Assemblers	19.8	0.8	27.1
Lawyers	18.3	0.7	63.1
Sales Reps, Non-Technical	17.4	0.7	26.9
Computer Operators	17.3	0.7	81.9
Clerical Supervisors	17.2	0.7	30.3
Physicians and/or Surgeons	16.5	0.6	41.6
Licensed Practical Nurses	16.3	0.6	34.6
Maintenance Repairers, Gen. Utility	14.9	0.6	25.3
Sales Agents, Reps, and Real Estate	14.7	0.6	61.3
Dental Hygienists, and Assts	14.3	0.6	51.1
Drafters	14.0	0.5	36.0
All Other Occupations	1,248.0	48.5	n/a
TOTAL, ALL OCCUPATIONS	2,572.0	100%	26.2%

Source: Projections of Employment 1980-1990: California Employment Development Department, Sacramento, 1985.

A primary shift in jobs of all types and levels is the increasing complexity of jobs. In 1950 about 50 percent of all jobs were blue collar industrial and 20 percent required high levels of information processing. By 1985, 7 percent of the jobs were blue collar industrial and 60 percent required high levels of information processing. This shift continues and will be exacerbated by ongoing technological development. Industries across the nation have been dealing with this shift and are learning how to survive in an ever-changing technological world. The need for international competitiveness has forced industries to find strategies to compete.

Those industries that have high labor costs, stable production, and stable technologies are most vulnerable to foreign competition. Workers with low skill levels who perform repetitive processes are likely to be vulnerable. Industries that continue to change and adapt, to utilize available technology and continue to upgrade the work force are likely to have the strongest chances for success.

Two forces -- trade and technology -- are upskilling jobs across the nation. Open trade policies, while advantageous for some workers, inevitably present difficulties for others. On the whole, however, we are seeing increased specialization in high paying scientific and management jobs. A large number of other jobs are being upskilled or increased in their complexity. It is important to understand that the upskilling of many jobs does not result in higher wages; rather the performance expectations are simply being increased. Moreover some traditional jobs have been deskilled and low skilled jobs eliminated.

It is critical to keep in mind that although many occupational titles remain the same, the ways that work is accomplished is continually being restructured. For example, currently there are 1.5 million electronic workstations in American offices and by 1990 there will be more than a ten-fold increase to 17.5 million.[8] Computer and computer-controlled equipment will permeate every aspect of American life and, by the end of the century, millions of jobs will involve laser technology and robotics.[9]

Other major trends that tend to increase the complexity of jobs emanate from the efforts of industries to remain competitive. Industries have moved into specialized markets which may require greater use of technology and flexibility. For example, mass production steel and textiles have declined, but specialized steel or textiles have taken their place. Customization of products or services which provide the customer with a number of individualized services requires workers with greater skills and abilities.

The New Work Force

Learning to market U.S. products abroad is another task for industry. International marketing requires states and companies to compete in ways not traditionally experienced. This also calls for new worker skills. Reviews of work force trends suggest that the primary

impact of an economy that has been transformed by a changing nature of work, a new source of energy (information), and international competition is the need for a new work force. Some of the characteristics of this new work force, as identified by Kantor and others, are shown in Table II.

A primary difference in the nature of work in an industrial society is that physical strength is a major asset for work. In an information society, intellectual abilities are the primary asset for work. Taking a work force steeped in the industrial age, traditions of standardization, centralization and the top-down authority and giving them skills for flexible, autonomous, creative and participative decision making is a major challenge for the U.S. work force and for those who prepare people to enter the work force.

TABLE II

Characteristics of the New Worker

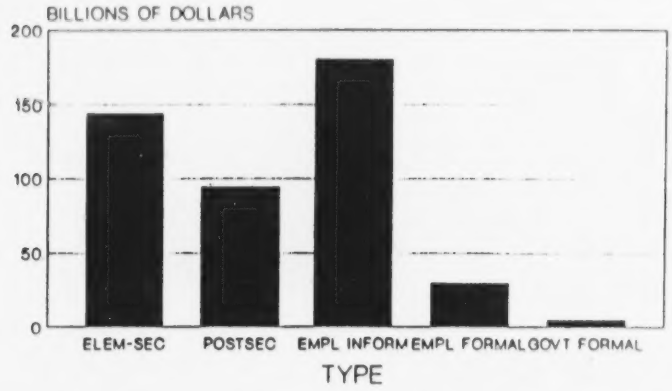
Industrial Society	Information Society
Unskilled temporary jobs	Skilled jobs, career-oriented
Simple tasks	Complex tasks
Accountability by supervision	Accountability by observation of performance
Single occupation	Multiple occupations
Stable employment	Changing employment
Close to production	Close to customer
Dependence on a bureaucracy	Greater independence and autonomy
Linear thinking	Organic thinking
Stable markets	Changing markets

Source: A. Carnavale, ASTD, Washington, D.C., 1987

Preparing the New Work Force

There is need to prepare and retrain people for the new work force. This need for retraining is extending the boundaries of what has been called the learning enterprise or learning society. While much of this training and retraining of the U.S. work force must fall on the traditional educational and training institutions, the elementary, secondary and post-secondary institutions are now matched in scale by the learning systems of the general economy. Informal on-the-job training and formal business sponsored education and training have become large enterprises. Figure 2 provides a picture of the relative size of the components which comprise the total U.S. learning enterprise.[10]

Figure 2.
Nature of the U.S. Learning Enterprise in 1985



Source: A. Carnavale, ASTD, Washington, D.C., 1987.

As shown in Table III, studies of where people learn what they need to know to be prepared as productive members of the work force suggest that the greater the need for information processing skills, the greater the importance of formal schooling experiences.[11] The more service or craft oriented jobs are, the lesser the role of formal schooling. The upscaling of jobs and continuing transformation of the work force that is evident now calls on formal schooling experiences to make greater contributions to all types of jobs. Moreover, education systems begin to place greater emphasis on the applications of knowledge and the development of comprehensive performance skills, the impact of formal schooling in preparing youth and adults for the work force should increase.

TABLE III

Sources of Preparation in Qualifying for the Work Force

Occupational Group	Formal Schooling	Formal Company	Informal On-The-Job
Managers, professional, technical and sales	66%	15%	44%
Service workers	36	25	51
Farm, forestry, fishing	30	5	59
Crafts	24	26	62
Operatives, laborers	13	18	72

Source: A. Carnavale, ASTD, Washington, D.C., 1987.

Given the changes in the work force, it becomes clear that there is a mismatch between traditional educational systems and vocational training needs. Doing more of the same things will not meet the changed demands posed by jobs of the future. What is needed is a broader vision of education as a means of human resource development and a method of increasing human performance and productivity. This perspective suggests fundamental change of our methods of preparing high quality workers. One need, at this point in time, is a common framework for human resource development. As shown in Table IV, Carnavale has suggested a framework which includes four performance skill areas.

TABLE IV
A Common Framework for Human Resources Development
(Performance Skills of Workers)

Personal Reliability (Affective)	Individual Competence (Intellectual)
Goal Setting	Communication
Motivation	Computation
Ethics	Culture
Personal Management	
Economic Adaptability	**Group and Organizational Skills**
Career Development	Leadership
Employability	Creativity
Learning to Learn	Teamwork
Problem Solving	Negotiation
	Organizational Relationships
	Interpersonal Skills

Source: A Carnavale, ASTD, Washington, D.C., 1987.

Formal schooling has focused primarily on the intellectual components of individual competence, i.e., communication, computation, and culture. Little conscious or systematic attention has been given to the areas of personal responsibility, economic adaptability, and group and organizational skills. Individuals learn many of these skills from home experiences or on-the-job experience. Research has shown that it is disadvantaged children of lower socioeconomic groups who are least likely to learn these skills. When these skills are not taught in the school system it is easy to understand how inequities in job preparation exist. If we are to move away from a two-tiered system of employment and opportunity, it is essential that formal schooling include the systematic development of a broader range of knowledge and skills that lead to a more comprehensive performance capability for all students. Career-vocational preparation programs should play a leading role in the movement to better prepare students for succeeding in the work force.

Looking ahead to the likely future of the California economy, the following points can be made:

- The diversity of the California economy provides a major strength for the state's future.
- The future well-being of the California economy is dependent on a large human infrastructure of highly skilled workers.
- Education and training systems provide critical components of economic development.
- The state should undertake coordinated efforts to anticipate probable dislocations and problems in the economy created by technology, changing national priorities and trade, and prepare workers for transitions.
- The full scope of the learning enterprise in California should be identified and efforts made to develop a common framework and ongoing communications about human resource development among education and development organizations.
- Formal schooling programs must extend their understandings of the range of knowledge and skills required for high levels of human performance and incorporate curriculum and instructional methods which develop these skills.

California's Changing Demography

The most valuable resource of any state or nation is the people who live there. One of every nine Americans is a Californian and California is expected to have a population of 30 million by the year 2000.

California's population, according to the 1980 census, could have been described as a state of Baby Boomers -- very few young and very few old. California probably had more singles -- 30-40 year olds than any other state. This may explain the relatively low birth rate evident in California in 1980. If it were not for in-migration, the population of the state would actually have been decreasing. Fifteen percent of California's population was born in another country while 55 percent was born in another state. The profile of California's population which emerged from the 1980 census is shown in Table V.[12]

The picture of the state provided by the 1980 census has changed dramatically in that a new population explosion is evident which is changing the percentages of the population by age groups. The future growth in California's population will be due to increased births, longer lives and in-migration from other states and other countries. About half the growth will be attributable to natural increases (birth minus deaths) and slightly more than half to net in-migration; mostly immigrants from other countries.[13] It is estimated that two-thirds of the world's immigrants come to the United States and one-third of these immigrants settle in California.

TABLE V

California's Population Characteristics
According to 1980 Census Data

Characteristic	State Rank	Status
1980 population	1	(23,667,000)
Black population	2	(1,819,000)
Percent Black	21	(7.7%)
Hispanic population	1	(4,544,000)
Percent Hispanic	3	(19.2%)
Foreign born	1	(15.1%)
Percent over 65	34	(10.2%)
Percent under 16	43	(27%)
Median Age	22	(29.9 years)
Women in labor force	13	(52.4%)
College graduates	8	(19.6%)
Married-couple households	49	(55.2%)
Owner occupied housing	48	(55.9%)
Median household income	10	($18,243)
Housing value	2	($98,700)

Source: Hodgkinson, Harold L. California: The State and Its Educational System. IEL, 1986.

Young Children. Between 1980 and 1985, the numbers of children under six in California increased by 25 percent, from 2.04 to 2.55 million.[14] The higher levels of birth are expected to continue for the rest of the century. More importantly, the environment for many of the children under six in California may not be optimal for their growth and well-being Adjusted for inflation, the California family income was less in 1983 than 1970.[15] At the same time, housing costs have increased dramatically. The resulting economic pressures created by divorce, single-parent households, and the comparatively low incomes of working mothers place many children at risk.

In 1980, one out of every six of California's children lived in poverty. Today, one out of four, or 645,000 of California's preschool children live in poverty, almost twice as many as in 1980. Another 150,000 live in families with incomes near poverty.[16]

Nearly half of the young children who live in poverty live in homes headed by women. Among 3-5 year old children living with single mothers, 57 percent live in poverty. Fifteen percent of all children under six years old live in households receiving public assistance, and over half of children 0-2 with single mothers live in households on welfare.[17]

It is anticipated that the numbers of young children in California will remain constant until the year 2000. The concern, however, must be that various societal conditions -- teenage pregnancy, divorce in young families, low wages earned by less educated women and job discrimination toward females -- will lead to an increase in the numbers of young children living in poverty. It has been projected that unless steps are taken to provide interventions into the lives of young children and their parents by the year 2000, as many as one out of every three of California's children may be living in poverty and relying on public assistance.

California's proportion of children under six years old who live in poverty -- 25 percent -- matches the national figures. It is important to understand that nationally, two-thirds of all poor children are white, but Black and Hispanic children are proportionally more likely to be poor. Forty-three percent of Black and 40 percent of Hispanic children live in poverty. Black children are nearly three times as likely to be poor as white children, and the average Black child can expect to spend five of the first fifteen years of childhood in an impoverished home.[18]

Poor children and especially poor minority children suffer increased problems in almost every area -- health, safety, family stability, work opportunities, learning opportunities and life chances. It is apparent that many elements of community systems are not working to prepare children and families, especially minority families, for their participation in the larger society. We are seeing the development of:

> A permanent underclass of young people for whom poverty and despair are life's daily companions. These are youth who lack fundamental literacy skills and work habits. They feel alienated from mainstream society, and they seldom participate in the democratic process. They cannot attain the living standard of most Americans because they are trapped in a web of dependency and failure.[19]

Perhaps one of the most difficult areas for communities and schools to understand and respond to is the need for greater attention and services being provided to young children. Communities must begin to see the needs to provide services for the child from prenatal care through adulthood. Earlier intervention efforts are generally more successful and less costly. For example, in the Ypsilanti, Michigan, Perry School study of preschool programs, students who attended preschool some 16 years earlier were 37 percent more likely to have graduated from high school than a control group not attending preschool. Preschool attendees were 81 percent more likely to be enrolled in college or vocational training, and 61 percent were more likely to attain average or better scores on tests of functional competency. They were 57 percent less likely to be classified developmentally disabled and they spent 43 percent less time in special education programs.[20]

The economic benefits of this program were dramatic. The Perry School study indicated that the return on the two years of preschool were equal to three-and-a-half times the cost of preschool. Students needed less special and remedial education. Other economic benefits were lowered costs for law enforcement and welfare assistance, and the higher earnings by members of the preschool group at age 19.[21]

Valuable as early childhood programs may be, there is also a need for dependable programs of child care. Many economically limited mothers and families require child care if they are to work and maintain themselves. Child care and early childhood education must be twin components of services for young children. Business, schools and other programs are major resources for quality child care as well as early childhood education.[22]

Teen Parents. A serious issue in the increasing number of disadvantaged children is the dramatic increase in unmarried teen parents and the related problems of poverty and dependency. Eighteen percent, or one out of six babies born in the United States today will be the child of a teenage mother. Up to 96 percent will keep their babies and very often the mothers are second or third generation teenage parents.[23]

In California, 14 percent of all teenage girls become pregnant. In 1984, 31,400 children were born to mothers 18 or younger (over 7 percent of all births).[24] About 80 percent of teenage mothers drop out of school before graduation;[25] a large proportion will end up on welfare (nationally, 50 percent of welfare expenditures in this country goes to families in which the mother began her parenting as a teenager); and about 20 percent will have a second child before the age of 19.[26]

A major reason that disadvantaged children of young mothers fail in educational programs is that they lag in physical, psychological and language development essential to academic learning. Studies have suggested that as many as 50 percent of students are placed in grades one or two years ahead of their developmental age.[27]

The Council for Economic Development[28] identified some of the reasons for this developmental lag. These include:

- Low birth weight -- Medical evidence demonstrates that low birth weight is often linked to the youth of the mother, inadequate medical care, and inattention to proper nutrition. Low birth weight is related to a variety of learning disorders, including hyperactivity and dyslexia.

- Emotional deprivation -- Young or deprived mothers who have children may not be prepared for the emotional burden of caring for them. Many babies receive sporadic or inconsistent attention, making it difficult for them to feel secure.

- Chaotic home lives -- Children in disadvantaged homes may live in crowded conditions or even in shelters. They have to compete with others for attention and may never know any stability in their lives.

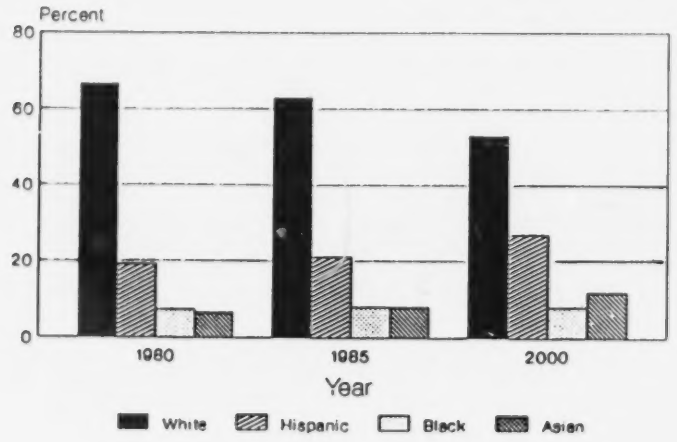
- Drug dependency -- Some disadvantaged mothers are drug users who inadvertently damage the health of their unborn child. Children living in homes of drug users suffer even more problems than those typically seen in disadvantaged homes.

The disadvantages experienced by children and teen parents outlined above are compounded for many by chronic poverty, minority status and discrimination, low levels of family education, sex discrimination and sex role sterotyping, handicapping conditions, and other sources of disadvantages. The scope of these problems requires multiple interventions and approaches. While public schools must be an integral partner in meeting some of these, comprehensive programs of community health, social and educational agencies that have the support of government and business communities will be needed to achieve the turn around necessary to prepare all children for their full participation in our society.[29]

Racial-Ethnic Groups. A primary characteristic of California's population is its racial-ethnic diversity, a diversity which continues to increase. Ethnic minorities make up more than one-third of the California population. By the year 2000 the percentage of racial-ethnic minorities will increase. Blacks are expected to maintain at eight percent of the population. Hispanics will move from 21 percent to 27 percent of the population and Asians will increase their position from eight percent to 12 percent. By the year 2010, California will be a "majority-minority" state.[30]

Figure 3

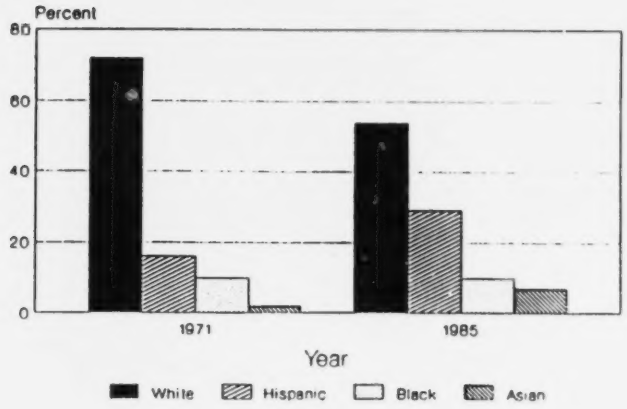
Racial Ethnic Proportions of California's Overall Population



Source: Brown and Haycock, 1984

Figure 4.

Racial Ethnic Proportions of
California's Public School Population



Source: Conditions of Education, PACE, 1986-1987.

A disproportionate number of minorities are poor. In 1979, 20 percent of Black families, 16.8 percent of Hispanic families, and 5.5 percent of white families lived in poverty. Of about one million children under 18 living in poverty in California, approximately 300,000 are white, 170,000 are Black and 400,000 are Hispanic.

The greater proportions of racial-ethnic minority children in California schools is evident in public school enrollments. Although about one-third of the total population are racial-ethnic minorities, 48 percent of the 1985-86 public school enrollment were minorities. As shown on Figure 4, the percentage of minorities enrolled in public schools increased dramatically from 1971 to 1985. If minority dropout rates were not so high, minority enrollment would surpass 50 percent.[31] The percentage of minority children differs by grade level. It is above 50 percent in elementary grades and drops to about 38 percent by 12th grade.

One impact of the in-migration trend and increased minority presence in the state is that about 25 percent of the California public school population speaks a language other than English. Twelve percent of these students are English proficient and 13 percent limited-English proficient (LEP). Of the 524,082 LEP children in 1986, 68 percent attended schools in nine southern counties. The Office of the Los Angeles County Superintendent of Schools alone enrolled more than 240,000 LEP students which is 46 percent of the statewide total.[32]

The continuing immigration into California includes large numbers of language minorities. Approximately 50,000 students are reclassified as English proficient each year, but more than 70,000 LEP children

enroll in kindergarten each year, as well as additional students in upper grades. Spanish is the language of 75 percent (380,375), but thousands of LEP students speak Vietnamese, Cantonese, Tagalog, Cambodian, Korean, Lao, Hmong, Mandarin, Japanese and many other languages. Schools are faced with large numbers of non-English speaking children who need additional help and a need to recruit or train teachers in a wide variety of languages to serve these children.

Racial-ethnic diversity is a strength for a society when the energies of various groups can be united toward common goals. This strength, however, can only be fulfilled when we ensure that all groups have the knowledge and skills to participate fully in our society.

Students with Handicapping Conditions. Another important group which requires a response from schools and communities is children with handicaps. These children are capable of participating in academic, social, and other developmental activities but without special consideration they may be left out of mainstreamed preparation for adult life. Children with handicaps are those who are mentally retarded, hard of hearing or deaf, partially sighted or blind, speech or language impaired, other health impaired, learning-disabled, multi-handicapped or who have other handicapping conditions that prevent their participation in education without special education services.

Nationally, 10.98 percent of public school children are served in special education programs. California special education programs served 378,852 children or just under nine percent of all children in public schools.[33] The largest numbers of children with handicaps are represented in the categories of "specific learning disabilities" (212,055 or 56 percent), and "speech impairment" (95,767 or 25 percent).

Table VI includes a listing of the categories of children with handicaps in 1981 and 1985. Increases in the number of students with handicaps across this period paralleled the increases in total school enrollment. The greatest increase was in the less severe handicapped populations such as specific learning disabilities and speech impaired with some decline in students with sensory and physical types of disabilities.

TABLE VI

Number of California Children Being
Served in Special Education Programs
(ages birth through 21 years)

Handicapping Conditions	1981		1985	
	Number	%	Number	%
Specific Learning Disability	190,796	53	212,055	56
Speech Impaired	92,770	26	95,767	25
Mentally Retarded	28,266	8	26,843	7
Other Health Impaired	15,083	4	12,750	3
Emotionally Severely Disturbed	8,743	3	9,206	2
Orthopedically Impaired	7,595	2	7,297	2
Multi-handicapped	5,688	2	5,587	2
Deaf	3,318	1	3,285	1
Hard of Hearing	2,938	1	2,498	1
Visually Handicapped	2,311	1	2,498	1
Deaf/Blind	171	0	160	0
	357,679		378,852	

Source: California State Department of Education, Special Education Division, Sacramento, 1986.

Although it is difficult to project future numbers of special education students, it is likely that increased proportions will be realized. Improvements in medical procedures save children who may not have lived in the past; increasing numbers of teen and poor mothers often result in higher percentages of underweight children or children with inadequate nutritional balance who suffer handicapping conditions; genetic mutations resulting from environmental pollutants -- all of these and other factors are likely to result in increased proportions of children with handicapping conditions. Whether these factors will be balanced by other considerations such as prenatal care programs, reduced teen pregnancy, nutritional programs, etc. which can reduce the proportions of handicapped children remains to be seen. In any event, the costs of caring for the nine percent of public school children with handicapping conditions is likely to remain a major consideration in educational funding.

The overall benefits to society of providing appropriate career-vocational training services to students with handicapping conditions should be emphasized. Youth and adults with handicapping conditions continue to experience high unemployment rates of 50 percent to 80 percent.[34] With appropriate training, many of the 300,000 special education students graduating nationally each year could work. If effective educational programs were provided in public schools which prepared such students with basic skills and employability skills,

increases in their economic participation could be realized, their productivity could be increased and public costs associated with supporting their dependency could be decreased.

Older Citizens. Developments in medicine and wellness programs have resulted in increases in life expectancy. In 1980, life expectancy at birth averaged nearly 75 years. The proportion of older citizens is increasing. Although California's current percentage of 10.2 percent of the state's population being over 65 is under the national average of 12 percent, it will move to 12.3 percent by the year 2000. The largest percent of growth from 1985 to 2000 (81 percent) will be among those 85 and over. Increases in the oldest group will result in an increase of some 468,000 citizens. The 75-79 year olds and 80-84 year olds will increase by 59 percent, accounting for more than half a million persons. This gain of slightly more than 1 million persons 65 and over will have a profound effect on state services, health care and nursing care demands, local services and political alignments.

Traditionally, older citizens have been one of the most impoverished group in our nation. This situation has changed in recent years since children, particularly children in single parent families, now exhibit the highest rate of poverty. Nevertheless, as shown in Table VII, many of the older citizens face difficult situations. (The poverty threshold for one person age 65 and above was an annual income of $5,160 in 1985; for a couple it was $6,510.)

TABLE VII

Older Californians by Poverty Status in 1985

Age	Total In Age Group	Income Below Poverty Level	Income 100-124% of Poverty Level	Income Above 125% of Poverty Level
65+	2,490,702	6.7%	9.0%	84.2%
65-74	1,561,700	5.4	7.6	86.9
75-84	740,881	7.9	11.0	80.9
85+	188,120	13.0	13.1	73.8

Source: California Department of Finance, Sacramento, 1986

The proportion of poor increases with age. California's 6.7 percent of older poor represents a decline from 19.2 percent in 1960. The rate for the total population in 1985 was 14 percent.[35] Income alone, however, does not give an accurate picture of economic resources. Nearly two-thirds of Californians age 65 and over own the homes they

live in, and four-fifths of these homes are mortgage free.[36] The median home value in 1980 was $81,000 and it has increased in most areas of the state since this time. The resulting situation is that older Californians may be asset-rich but cash poor.

Concerns of old age impact men and women differently. There are 147 women to every 100 men aged 65 and over, a rate that increases with age. Nationally, this amounts to 14 million women, 33 percent of whom live alone. Older women who are also ethnic minorities have particularly difficult problems -- race and sex status place them at a much higher rate of poverty.[37]

One important implication of the growth trend in the proportion of the population over 65 is that there will be a substantial erosion of the tax base. As older people drop out of the work force and no longer earn taxable income, they are likely to require more of the services supported by taxes. The task of state leaders will increasingly call for the development of values, strategies and programs which can balance the concerns of older citizens and the needs of other sectors of the population.

Chapter III

The Role of Educational Systems

Public Elementary-Secondary Schools

The public elementary-secondary schools have been a cornerstone of American society. Public schools were originally designed to prepare the sons of white landowners with the knowledge and skills needed for leadership roles in the society. Over time other populations were provided the opportunities to attend school--women, minorities and the handicapped.

Schools were originally designed to help people live better lives and little was done to prepare them for their life's work. Gradually the relationships between education and preparation for life work were established and schools expanded their curriculum and approaches.

A basic issue and concern throughout the history of public schools has been their role in "sorting" students for life opportunities and roles based on their current status and the expectations of educators. The sorting process is often unrecognized because of the subtle and frequently unconscious behaviors that perpetuate the process. The expectations of teachers and administrators, curriculum processes, instructional methods, testing methods, identification of children into special programs, counseling procedures--these are only a few of the ways that sorting processes remain alive and well in schools. Some of the more glaring problems with sorting are that it deprives students from making choices regarding career paths and from receiving a "well rounded education," it relegates low academic achievers into low skill occupational training, and it results in children at the lower end of the educational spectrum receiving fewer hours of education.[38]

Public schools work well for approximately 20 to 30 percent of students, reasonably well for another 30 percent, and poorly or not at all for the remainder.[39] The primary group for whom the system works well is middle class children, usually Anglo. In a sense, the children of the middle class are provided resources to ensure their continued success and minority children and low income children are not provided the skills essential to utilize the school experience to their fullest potential and to change the opportunities for their lives.

Our best understandings of the processes by which differential opportunity exists between middle class and low income children is found in the effective schools research. Research of the 1960s, often called the family effects research, identified the close correlation between social class and academic success. Ron Edmonds challenged the conclusions of the family effects research which suggested that schools could do very little to overcome the early effects of family experiences. He identified schools that had overcome family effects--schools where the achievement levels of low income white children and minority children came close to

the levels of middle class children.[40] He then studied these schools to determine the critical factors for their success. The factors which he identified included:

- Instructional leadership which was most frequently provided by a principal committed to instruction and curriculum and effective learning processes;
- High expectations on the part of staff for the achievement of all children;
- An emphasis on the development of basic skills;
- Procedures for periodic assessment to ensure student learning and achievement; and
- Involvement of parents and community in the learning process.

The effective schools research has been used widely in efforts to overcome the learning differentials between middle class children and lower socioeconomic and minority children. There have been numerous demonstrations that schools can make a difference in the lives of most students. Inequities of the system can be overcome with systematic program efforts.

At the same time that we are learning how to make the current system work better for all students, we are faced with the realization that changes in our society create the need for significant changes in the schooling of children. Past concepts of education were based on a rather limited framework of education. Emphasis was given to teaching content with little understanding of the complexities of helping people translate facts and ideas into applications and action. There was also little awareness of the affective elements of education and the holistic nature of learning processes which involve physical, emotional, cultural and intellectual processes.

In fairness, it must be pointed out that education processes were designed to match the needs of the society. Robert Carkhuff points out that the goal of education in an industrial age was to limit responses.[41] If schools were preparing a majority of students for blue-collar industrial jobs, a primary skill to be learned was standardization. This translated into education with an emphasis on convergent thinking, an assumption that there was one right answer.

We then began to learn that persons who had a variety of responses tended to be more successful. In more recent years we emphasized the need for divergent thinking. Carkhuff suggests, however, that divergent thinking is not sufficient--that a true "processing" of information is essential to problem solving, and learning to learn skills essential for an Information Society.

Two primary challenges must be faced by schools. The first is to develop an understanding and the skills to adapt and improve instructional methods, curriculum, and student interactions, in ways which will meet the needs of all students. The second is to redesign educational processes to help students attain the higher thinking levels which are required by the

needs of our Information Society. Meeting these challenges will be difficult for all public schools. California public schools, which must also cope with high levels of growth and increasing diversity, will be strongly pressed to find ways of making schools effective and redesigning the basic goals and directions for education.

The Nature of California Schools

Within California's 1,024 public school districts, enrollment has increased steadily from 4.2 million to 4.5 million students over the past decade. Although increases are occurring throughout the entire state, Riverside, San Bernardino, Sacramento, and San Diego counties have been the major areas of growth since 1984. There are 3 million students enrolled in primary grades (K-8) and 1.5 million in secondary grades (9-12). Highest enrollment growth is occurring in grades K through 8 with a 4.3 percent increase in 1988 alone. In contrast with growth in enrollment, the number of public schools in California decreased from 7,386 in 1987 to 7,125 in 1988.[42] More students in fewer schools suggests a need for school construction, finance, and teacher recruitment.

This enrollment growth is matched by an increased ratio of diversity within the student body. Of the almost 4.5 million students, 49.9 percent were members of minority groups in 1988. Hispanic students made up 30.1 percent of the entire student population, followed by Black students at 9.1 percent, Asian students at 7.3 percent, Filipino students at 2.1 percent, American Indian or Alaskan Native students at .8 percent and Pacific Islander students at .5 percent. Primary grade school enrollment was comprised of over 50 percent minority students, while minorities made up 45 percent of secondary schools.

The hiring of minority teachers is far behind the rate of minority student enrollment. Only 6.9 percent of California's teachers are Hispanic, 6.1 percent are Black, 3.4 percent are Asian, .7 percent are Filipino, .7 percent are American Indian or Alaskan and .1 percent are Pacific Islander. Curiously, American Indian or Alaskan is the only group, of all public school teachers, that is represented by men teachers almost in equal proportion to women teachers.[43]

Over one-fourth of California's minority students have a primary language other than English and more than 14 percent of all students are identified as being LEP. Moreover, the number of non-English speaking students is continuing to grow, from 487,835 in 1984 to 613,224 in 1987. Data from a 1987 survey of all California school districts revealed that 45 different non-English primary languages are spoken by students, with 86.4 percent of students represented by five languages: Spanish, Vietnamese, Cantonese, Filipino, and Cambodian. Spanish is the primary language of 73.3 percent of LEP students. Nine out of every ten identified LEP students are enrolled in bilingual classrooms or other English language education programs.[44]

While the California economy has been robust over the past decade, expenditures on public education have lagged behind most other states. In

fact, despite public pressure regarding this issue, the gap between what California spends on public education and what most other states spend on teaching their children has widened. In 1984 California expenditures on schools was $158 less per average daily attendance (ADA) unit than the national average, in 1985 it was $259 less, in 1986 it was $193 less, and in 1987-88 it is estimated to have been $267 below the national average.[45] California ranked 45th among all states in 1985-86 in terms of its level of state and local revenue spent for public schools as a percentage of personal income.[46] Funding limitations continue to be an important barrier to the improvement of California educational programs.

In 1985 there were 180,000 full-time teaching positions within California public schools, but because professional staff were counted in more than one assignment group there were actually fewer teachers than positions. By 1988 the number of California public school teachers had grown to 200,000.[47] While the ratio of teachers to pupils decreased slightly, from 24.6 in 1983 to 24.2 in 1988 in elementary schools and from 24.7 to 23.4 in secondary schools, there was actually a slight decrease in average class size from 27.3 to 26.8 in elementary schools and 27.9 to 27.5 in secondary schools.[48]

Academic achievement appears to be improving, particularly within the college-bound student group. This is especially good news in the aftermath of the steady decline in the Scholastic Aptitude Test (SAT) scores of California students which occurred from the early 1970s, when California students scored 12 points above the national average, to the mid-70s, when they began dropping below the national average. These fluctuations in student performance must be set in context. Almost all students taking the SAT twenty years ago were Anglo, whereas 50% of California's students taking these tests now are minorities. Math scores in particular have shown a consistent pattern of growth over the past ten years from 466 to 484. Verbal scores have reflected little change during this same time, from 427 to 424. California students scored higher than the national average (476) in math and lower than the national average (428) on the verbal portions of the SAT in 1988. It is interesting to note that the national average scores of the verbal ability tests went down two points from 1987 to 1988, while the national average for math stayed the same.[49]

While the SAT measures aptitude for scholastic work, the California Assessment Program (CAP) is a statewide testing approach that measures the academic achievement of California students. These tests measure student performance in reading, written expression, mathematics, history, and science in grades 3, 6, 8, and 12. Because of the addition of a direct writing test for grade 12, and other minor variations, caution must be exercised when comparing scores across years. However, scores have not gone down consistently for any subject area or grade level since the beginning of CAP data analysis in 1983. For example, the reading scores of California's eighth graders have risen from 240 in 1983 to 252 in 1988. Similarly, the math scores for this group have gone from 251 in 1983 to 268 in 1988. Breaking these student data down by parents' socio-economic status reveals, as one might expect, that students whose parents did not

finish high school score about 130 points below students whose parents' education extends beyond a four year degree.[50] With the exception of Asian students, who scored 20 points higher in math than Anglo students, the mean scores for Anglo students in 1988 were approximately 100 points above those of minority students' in math, and over 50 points higher in reading.[51] These differences suggest that more and different kinds of efforts need to be made to ensure that the academic achievement of minority students is not sacrificed.

A major problem in California and the rest of the nation is the dropout rate. James Catterall of the University of California at Los Angeles points out how both the dropout and society incur costs when education is cut short. His research reveals that dropouts face higher unemployment rates than their graduating classmates, and that they are more likely to suffer periodic losses of employment along with relegation to lower paying occupations throughout their working lives. Dropouts generate substantially less income over their lifetimes than those who finish high school. Moreover, the nation's productive capacity and actual output suffer when individuals curtail their personal development. Reduced national income produces public costs in the form of reduced tax collections for various levels of government.[52]

There is evidence that dropouts retrospectively question the correctness of their decision not to finish school.[53] Furthermore, the dropout is a more frequent recipient of welfare and unemployment subsidies, and is much more likely to engage in criminal activities. Beyond these social costs, which are reflected in public budgets, dropouts evidence lower voter participation and a propensity to have children who follow in their educational footsteps.[54]

A final dimension of social costs tied to the failure of youngsters to finish high school has to do with the imbalanced distribution of the problem across groups in society. Children who are non-English speaking, ethnic minorities, and the poor are much more likely than others to experience shortened school careers.[55] For example, while the overall student dropout rate from grades 10 through 12 was 23.1 percent in 1986-87, the rate for Hispanic students was 43.4 percent, and the rate for Black students was 37.4 percent.[56]

Russell Rumberger of the University of California at Santa Barbara has illustrated the problems associated with trying to compare dropout rates across different states and even across regions within a state. His research reveals that there is no consensus definition of a high school dropout, nor is there a standard method for computing dropout rate. Determining the magnitude as well as the rate of increase or decrease of the problem is thereby seriously hampered. The United States Census Bureau computes dropout rates based upon the proportion of a given age cohort that is not enrolled in school and has not completed high school. The other widely cited national dropout statistic is based upon attrition, i.e., data on the proportion of a high school class, usually the ninth grade, that graduate four years later. U.S. Census Bureau data for the high school class of 1984 yielded an average attrition rate of 29.1

percent, with California ranking as the seventh worst state in the nation with a 36.8 percent attrition rate. More distressing still was evidence that the growth of California's attrition rate from 1972 to 1984 (from 20.1 percent to 36.8 percent) was higher than the growth rates of those other states showing the highest overall levels of attrition.[57]

Attrition formed the basis of data collection on dropouts by the California Department of Education in 1986 when the dropout rate was reported as 30.9 percent. While this appears to represent a decline in attrition from the 1984 Census report, it is not clear whether California and U.S. Census Bureau data are based on similar measures. In 1987 California changed its recording system and began to define a dropout as a student who is absent from school for 45 consecutive days and for whom no official request for a transcript had been made by another school. Using this definition, 26.2 percent of California students were considered dropouts in 1987 and 22.8 percent were considered dropouts in 1988.[58]

Tempting as it is to make empirical generalizations that dropout rates are associated with such family-related factors as low parental educational and occupational attainment levels, low family income, speaking a language other than English in the home, single parent families, and the absence of learning materials and opportunities in the home[59], there is no "typical dropout." Rumberger points out that a poor urban Black may dropout because he is doing badly in school, because his school is understaffed, or because he believes his economic prospects are poor whether or not he finishes school. A suburban, middle class White, on the other hand, may be more likely to drop out because he is bored. Although doing reasonably well in school, he may want to spend more time with friends, knowing that he can finish school later at a community college. The causes of dropping out are not easy to discern and differences among cases imply the need for a more comprehensive and complex explanatory model.[60]

Educational reform has been underway in California since 1983. High school graduation requirements have been increased to three years of English, two years of mathematics, two years of science, three years of social studies, and one year of foreign language or fine arts. These efforts appear to be associated with increased enrollments in core academic courses. From 1984 to 1987, enrollment in mathematics increased by 15 percent, in English by 17 percent, in science by 19.5 percent, in history and social science by 10.1 percent, in foreign language by 5.4 percent, and in fine arts by 10.2 percent.[61] Enrollment in vocational education, in contrast, has increased by only .1 percent from 1986 to 1987 after a sustained decline in previous years.[62]

As part of the overall reform effort, there has been an increase in both the degree and types of services provided to California's students with special needs. These programs have emphasized moving students into the mainstream rather than tracking and retaining students in remedial or special programs. The curricula of most special needs programs have been aligned with the core curriculum of the school. Intensive efforts in this

direction have been made within career-vocational education programs in particular, through the implementation of Model Curriculum Standards and Frameworks.

Along with special education and continuation schools, career-vocational education programs are particularly well suited for meeting the needs of handicapped, limited-English proficient, and disadvantaged students. The basic objectives of career-vocational education are to introduce students to various careers, to transmit specific occupational skills and concepts required for employment, and to reinforce students' acquisition of core academic skills by applying those skills to hands-on tasks. The primary objective of the more intensive ROC/P program, which sometimes requires students to leave their high schools and travel to another site, is to provide students with initial job skills.

There are both national and state debates about whether vocational education programs are effective for transmitting initial job skills and for strenghtening academic skills, such as learning to solve problems and to effectively communicate. These debates are being intensified by declining enrollment in career-vocational education programs and changes in the nature of work.

Under the leadership of Superintendent of Public Instruction Bill Honig, the California State Department of Education has identified career-vocational education as an effective way to support the state's goals of academic excellence. New directions in California which are affecting career-vocational education services are (1) a mandated core curriculum for all students, (2) the use of career-vocational education courses as a way to reinforce the core curriculum, (3) increased emphasis on coordinating career-vocational education instruction among and within institutions to assure a sequential program, (4) setting high standards for career-vocational education programs, and (5) adapting programs to accommodate technological changes. Shifts in the work force, declining enrollment, and lack of strong evaluative data create obstacles which must be overcome. Vocational education programs are under increasing pressure to change.

Recent national studies on the efficacy of career-vocational education demonstrate that it achieves its positive aims. Results imply that consistently taking and passing one year-long career-vocational education course each year from ninth through eleventh grade raises the high school completion rate of dropout-prone youth from about 64 to 74 percent.[63] This finding is corroborated by other studies which show vocational education's positive impact on dropout rates.[64]

Further still is evidence that students' academic achievement and post-school earnings are positively affected by taking a mix of vocational and academic courses.[65] Studies that have examined whether the payoff to vocational education differs for students from minority backgrounds have found that Hispanics tend to receive higher benefits from pursuing a

career-vocational program than do non-Hispanic Whites.[66] Rumberger and Daymount found that students whose parents' education was less than high school completion benefited most from career-vocational education.[67]

Career-vocational education as part of a balanced curriculum is, as yet, not a fully explored area of potential corrective action for many of the problems faced by California secondary schools. Career-vocational education is obviously not a panacea for solving the dropout problem, nor a magical approach for improving students' academic skills. It does appear likely, however, that career-vocational education programs motivate youth to stay in school who would otherwise leave and contribute more to learning basic academic skills than watered down academic courses.

Chapter IV

Career Vocational Education Programs for Special Needs Students

The California System

Of the 23 percent of high school students in career-vocational preparation services with special needs in 1986-87, most were economically or academically disadvantaged. Table VIII provides a distribution of students enrolled in career-vocational education in the various special needs categories. ROC/P programs served a higher percentage of handicapped students and a lower percentage of disadvantaged students than high school vocational education programs. Enrollment data for high school programs revealed that 96 percent of IEP students, 94 percent of disadvantaged students, and 80 percent of students with handicaps enrolled in career-vocational education courses were served in mainstream versus specialized classroom arrangements.

TABLE VIII

Students in the Career-Vocational Education
Special Needs Programs

Special Needs Student Population	High School Programs		ROC/P Programs	
	N	%	N	%
Limited-English Proficient	21,585	12.4	8,844	18.3
Disadvantaged	122,692	70.5	28,982	59.8
Handicapped	29,870	17.1	10,619	21.9
	174,141	100	40,517	100

Source: California Department of Education - Vocational Education - Fiscal System, Special Needs Enrollment Information from Document SDE-101-A3, run date 4188, and ROC/P Annual Enrollment of Special Education Students, Report 2, 7/88.

The special needs programs are supported, in part, by federal and state categorical funds. Local districts are permitted to claim federal funds earmarked under the Vocational Education Act to provide

supplemental instruction and support services to handicapped, disadvantaged, and limited-English proficient students. To receive federal funds for limited-English proficient and disadvantaged students, local programs must expend non-federal matching funds and may only use federal funds to supplement, not supplant, regular local expenditures. The supplemental use requirement holds for services for handicapped but the need for a local match is removed since the state matches these federal funds. The supplemental use and matching requirements of the Vocational Education Act exist to prevent state and local education agencies from using federal funds to supplant state and local funds and to increase the amount of state and local funds spent on vocational education services for students with special needs.

Some of the problems of the local administration of the special needs vocational education programs, such as vocational services for the handicapped, are documented in a recent study prepared for the Office of Special Education and Rehabilitative Services.[68] Local districts complain that categorical programs compromise local flexibility, introduce unnecessary administrative procedures, and foster programs that do not yield noteworthy educational accomplishment.[69] Moreover, the need to separately document costs leads to inadequate accommodation of students with special needs in mainstream classes and a large number of segregated vocational education programs. It is also claimed that funding mandates result in an overuse of classroom aides because they are easy to document as allowable expenses under special support services, a category which ideally would include a multitude of services specifically tailored to the needs of individual students.

A recent study of 30 vocational education programs in six states, including California, identified characteristics of an effective classroom for serving students with handicapping conditions.[70] These included the following:

- The instructional sequence offers different learning environments, from the most to the least restrictive, and ways for students to move from one to another;
- Vocational classes are small and each mainstream class serves just a few handicapped students;
- Classroom teachers have qualified assistance on a regular basis;
- Learning goals for the class include employability, academic, social and occupational skills;
- Teachers match instructional materials to student abilities; and
- Teachers provide extra attention to handicapped students without stigmatizing them through differential treatment.

These principles could usefully be applied to other special needs programs such as those for limited-English proficient and disadvantaged

students. An additional principle that should be included for LEP students would be the provision of bilingual or modified instruction to ensure student understanding of curriculum.

The same study went on to identify the "system elements" necessary for serving students with handicaps in vocational education programs. These elements would also be applicable in most instances for all students with special needs. They included:

- Professional development incentives for vocational teachers;
- A vocational assessment tied to the instructional program;
- Prevocational instruction that builds students' confidence and independence;
- A paid work experience program tied to vocational education;
- Transition services, including placement and follow-up;
- A high level of support services, including placement and follow-up;
- An intense level of support services from learning specialists;
- Regular communication between special and vocational education; and
- Strong administrative support for serving students with handicapping conditions.

Needs Evident From Demonstration Efforts

There is no question that the problems of special needs populations have been recognized and that programs have been developed and implemented to meet the unique needs of various groups. The Peninsula Academies,[71] the Educational Excellence Through Career-Vocational Preparation Project,[72] the WorkAbility I Program,[73] and the SB 65 Program[74] are four examples of on-going statewide efforts to demonstrate promising practices for serving secondary-age students with special needs. Although there is little solid evaluative data about the outcomes of these efforts, there is no doubt that successes have been achieved and the quality of vocational education services have been improved for thousands of California students. There is always, however, the concern that programs could be made more cost and programmatically effective. Despite the evidence that children with special needs are being served in programs, dropout and unemployment rates suggest remaining problems.

Based on the available data, which unfortunately do not provide a rich description of program activities, the following observations emerge:

- **There appears to be a lack of universal acceptance at the local level of the mission and primary goals of career-vocational education within the context of secondary education.**

  Changes in the larger society require a new conceptual approach to education in general, and vocational education in particular. Not only must vocational education adapt to the changing needs of the work force, but it also must contribute to a new view of educational goals. We are beginning to realize that the goals of education are not only to provide students with facts and knowledge. Knowledge must be accompanied with skills and the ability to apply and create knowledge. Vocational education's emphasis on the acquisition and application of practical knowledge and skills is one element that must be incorporated throughout the educational program. There is a need for a framework which outlines the unique tasks of career-vocational education and the areas where an integration of vocational and academic education is essential. The beginnings of such a framework are evident in the Model Career Vocational Preparation Curriculum Standards and Frameworks initiated by the Career-Vocational Education Division.

- **Approaches to meeting the needs of special populations are not sufficient and do not adequately build on the unique capabilities of "disadvantaged" and "handicapped" populations.**

  Low income and racial-ethnic populations and students with handicapping conditions bring unique strengths to the educational process which must be recognized and extended. Different learning styles, greater practical skills, and different problem solving abilities may be evident among these groups. The task for education is to view these characteristics as strengths and to anchor students to the educational process so they will develop knowledge and skills in other areas.

- **Increased emphasis is needed on the systematic buildup of knowledge about effective vocational education services for special needs populations.**

  A state program has to maintain a balance between funding tried and true approaches and systematic experimentation with new approaches that can increase our knowledge level. For example, the division's Educational Excellence Through Career Vocational Preparation Project provides a framework for experimenting with various program components, but these must be carefully formulated and documented. Working with schools to systematically test various program components will require technical assistance and research assistance, but such an approach could lead to better outcomes and more cost effective efforts.

- **There is a need to improve the preservice and inservice preparation of academic and vocational educators.**

Increased emphasis should be placed on improving teacher training programs. Academic and vocational instructors need to be equipped with core understandings and skills related to the world of work, career development, performance-based teaching, etc.

Designing or modifying state programs to meet these needs will require comprehensive efforts, but such efforts are essential for the long range improvement of vocational education. The final chapter of this report presents specific recommendations on how the Career-Vocational Education Division could use the special needs program as a vehicle for achieving broad scale redesign in the field of career-vocational education.

Chapter V

Recommendations for Improving Career-Vocational Education Services For Special Needs Students

The problems of special needs children and youth extend beyond career-vocational education programs and indeed the educational systems themselves. Eliminating all of the internal problems within school systems will not totally eliminate differential achievement; race, ethnic, and sex stereotyping; differential access to learning experiences, and other factors which inhibit the development of children. This is not to suggest, however, that career-vocational education programs cannot play a major role in increasing opportunities and moving toward a more equitable society.

Being An Agent For Change

The question can naturally be raised, "How can a comparatively small career-vocational education program for special needs students make a significant difference?" The answer must be that the division's special needs program be treated as an exemplary effort which impacts all its other programs. In the long run, the goals and strategies of the division's special needs program could contribute teaching methods and instructional strategies which benefit all educators.

The overall purposes of the Career-Vocational Education Division's efforts in the area of serving students with special needs are basically directed to making educational services more responsive to the needs of these students. Change efforts usually require a series of related steps to build a critical mass sufficient to bring about change. A change effort might be organized within a framework of the following components and recommended strategies:

- Increase awareness of differential access, participation, and achievement.

  - Support regular meetings among educators to plan and coordinate the career-vocational preparation services delivered to special needs students.

  - Emphasize the importance of early career-vocational awareness at the preschool level through junior high school.

  - Program personnel from the Career-Vocational Education Division should meet with district, county, and ROC/P administrators to implement new initiatives for special needs students which are based on teaching and learning research, and on demographic and employment trend data.

  - Develop and uniformly apply a self-assessment instrument to be used by local program administrators to internally evaluate and improve career-vocational education programs as they relate to special needs populations.

- Generate a public information program through ongoing publications, press conferences, and public service announcements to draw attention to successes and needs within secondary education and the impacts of the changing nature of the work force.

- Establish recruitment priorities to increase the number of career-vocational education teachers and administrators who are bi-cultural and reflect the ethnic makeup of California's student population.

- Develop cooperative interagency agreements between career-vocational preparation staff and other divisions and between the Department of Education and other state departments to assure consistency of directives given to local education agencies.

- **Increase understanding of the factors which influence the participation and achievement of students with special needs.**

  - Conduct ongoing management-level symposia for state staff and field leaders on "Employment in the Future" to identify specific reforms to be undertaken by the division in each area of its program. Invite representatives from rapidly changing industries (e.g. electronics, clerical, agriculture) to assist symposia participants with the development of position papers on ways to redesign career-vocational education programs to better reflect industrial changes.

  - Identify the knowledge and skills and provide the training needed by vocational educators in order for them to work with special populations from a positive value perspective.

  - Design and implement statewide and local management information systems to summarize information on the nature, cost, and outcomes of services and activities implemented to facilitate the success of students with special needs in career-vocational education programs.

  - Define individualized teaching strategies which facilitate special needs students' mastery of the competencies within the Model Curriculum Standards and Frameworks.

  - Review educational literature, existing experimental model programs, and existing standards (WASC Blend, CCR, High School Program Quality Criteria) and define the common components of exemplary programs for providing career-vocational education services to students with special needs.

  - Encourage educators to define their role to include advocacy with other public institutions for services and resources necessary for students with special needs to benefit from education.

- Upgrade the status of secondary educators by raising and adhering to competency standards for teachers and by fostering participatory management in schools whereby teachers provide input on administrative issues.

- Foster the involvement of all students and all teachers in vocational or civic school clubs or other special interest co-curricular school activities.

- **Provide training to vocational educators on the knowledge and skills needed to more effectively serve students with special needs.**

  - Develop and conduct preservice and inservice training experiences for teachers and administrators on teaching strategies such as active and participatory learning and accommodation of different learning styles; on classroom restructuring to incorporate resource rooms, interactive video, participatory learning environments, peer tutoring, affective material on teacher-student interactions, career counseling, vocational assessment, instructional strategy modification; on facilitation of parent and community involvement; and on how to obtain teaching and resource materials.

  - Develop liaisons with business, industry, and unions to foster more job placements and establish education as an extension of the community.

  - Facilitate working sessions where the common components of exemplary career-vocational education programs for students with special needs are explained to state and local educators and plans are made to change schools to incorporate common components.

  - Fund institutes, workshops, and teacher preparation time to permit vocational education teachers and administrators to work with experts on developing and evaluating promising practices.

  - Systematically demonstrate and evaluate classroom activities and curriculum materials in content areas which underpin successful performance in career-vocational education programs (e.g., vocabulary and conceptual development, mathematical reasoning and logic, career planning/development, self concept enhancement, etc.).

  - Structure symposia on the use of technology in career-vocational education and provide technical assistance to schools on the use of technology in improving career-vocational education services to students with special needs.

  - Develop and/or utilize training tapes (audio and/or video) and materials for inservice training sessions without the need for on-site expert trainers.

- Support information sharing among and within local programs related to skills for working with special needs populations, including support for peer observations, videotaping and other forms of individual feedback.

- Develop videotapes which can be used to demonstrate teaching practices and classroom organizational strategies which increase the learning of special needs populations.

- Define the body of knowledge needed by students in order that they develop self-esteem and learn self-sufficiency.

- **Showcase and reinforce successful efforts or programs to increase career-vocational opportunities for students with special needs.**

  - Develop a program monitoring system which expands upon the Department's Program Quality Indicators and use this expanded system to identify exemplary career-vocational education programs and outcomes for students with special needs.

  - Direct the use of P.L. 98-524 setaside funds and matching local funds for students with special needs so that local programs use these funds in a manner which promotes the adoption of exemplary practices.

  - Establish a "good news" activity within the Career-Vocational Education Division to identify and publicize successful projects.

  - Establish yearly recognitions and awards within each program area for school-based activities which have resulted in significant achievements by special needs students.

Conclusion

This report has focused on changes in California which are affecting the design and delivery of career-vocational education services for students with special needs. It has provided specific recommendations which the Career-Vocational Education Division could implement to facilitate the full participation of children with special needs in the economic, social, and political activities of California's future society. It has been stressed that the division's special needs program should play a leading role in expanding educational opportunities for children with special needs, but that the ultimate attainment of full social participation on the part of people with special needs will necessitate answers to questions which can only be dealt with through more fundamental transformations in our society and in the values of individuals.

The vitality of the California economy and society has been the result, in large measure, of its growth and diversity. Diversity is a primary value when groups are bound together with common goals and

values. Traditionally common goals and values have developed over time as new groups have learned about the society and have found ways of participating in and making society work for them.

A common core culture can only develop as a result of interactions among groups and a commitment to a caring society. A pattern of fragmentation is emerging, however, among groups and in the provision of services. Young children, teen parents, minorities, children with handicaps, limited-English proficient children, and older citizens are increasing proportions of the California population. Their abilities to participate and contribute to the society are continually being diminished.

In an industrial society, about 20 percent of the population were required to function at high levels in order to maintain and extend the society. The most significant impact of our transformation to an Information Society is that greater proportions of the population must function at higher levels. This is essential for a number of reasons. First, as a society we cannot tolerate the alienation and social problems created when large numbers within our population are not involved in and enjoying the rewards of the larger society. Second, we cannot afford the costs associated with poverty and lack of participation. Lost earnings and taxes, welfare costs, crime, health costs, social service costs -- all of these are outcomes of ignoring today's problems. Lastly, we must maintain the fundamental premise of equal opportunity for all groups which undergirds our democratic society.

Today we face a crisis of human resource development -- a crisis that is difficult to recognize because the indicators of the crisis are all too familiar -- poverty, lack of opportunity and lack of participation. What creates this crisis is a dramatic growth in the number of people who are being denied opportunities for achieving valued social roles and the changed conditions in our society. Our economic, social, and political well-being require greater development and utilization of human resources. In the long run, the future of the United States will depend on our ability to develop a commitment to, and programs for, the inclusion of larger proportions of disenfranchised groups within our population. This is going to be extremely difficult. We have believed that the American people are exceptional and that we can solve our own problems and influence our own destiny. Although we are still the most affluent society in the world, we are not growing and expanding at the same level as in the past. Resources are not as plentiful and we have greater competition for their use.

The need for an investment in the welfare of our total society comes at a time when many have "turned off" from the needs of the larger community to pursue their private well-being and when all sectors of our population are feeling anxieties and difficulties associated with unstable economic conditions. Many will continue to remain isolated from the responsibility we share, as members of a democratic society, to extend our common community to all segments of the population. Others will not understand the value of diversity and will resist reaching out and strengthening our common goals and achievements.

What is needed is a commitment to making the investment of money, time, and personal support which is essential to overcoming many of our problems. Financial support is essential but it is not enough. Many of the tasks that need to be accomplished do not require new funds, but instead call for new ways of using current resources. Our problems necessitate fundamental changes in the ways we provide health, educational, and social services at the local level.

The problems and issues discussed in this report are shared by all Americans, but the citizens of California will be among the first who must confront the difficulties of a diverse, rapidly changing, technological society. The California response will provide an indicator of our ability to remain true to the values of a democratic society. The extent to which children with special needs succeed today will in large measure dictate the extent to which our general society succeeds in the future.

Endnotes

1 Reich, Robert B. Tales of a New America. New York: Times Books, 1987, p. 44.

2 "America In Perspective," Oxford Analytica. Boston: Houghton Mifflin Company, 1986.

3 Ibid., p. 369.

4 Pierce, Neal R., and Hagstrom, Jerry. The Book of America. New York: W.W. Norton & Company, 1983, p. 747.

5 Ibid., p. 748.

6 Ibid., p. 773.

7 Ibid., p. 748.

8 Howard, Robert. Brave New Workplace. New York: Viking Penguin, Inc., 1985.

9 Gardner, David. A Nation At Risk: The Imperative For Educational Reform. Washington, D.C.: National Commission on Excellence in Education, 1983.

10 Carnavale, Anthony. ASTD, Washington D.C.: 1987.

11 Ibid.

12 Hodgkinson, Harold L. California: The State and Its Educational System. IEL, June 1986. Information on median income obtained from California Department of Finance, Census Data Center, May 14, 1986 in California 2000: A People in Transition: Major Issues Affecting Human Resources. Sacramento Assembly Office of Research, 1986.

13 Ibid.

14 California Department of Finance, Population Proportion for California Counties: 1980-2020 With Age/Sex Detail to 2020. Sacramento: 1986.

15 California Department of Finance, Census Data Center, May 14, 1986, California 2000: A People in Transition: Major Issues Affecting Human Resources. Sacramento, 1986.

16 Ibid.

17 Ibid.

18 Committee for Economic Development. Children In Need: Intervention Strategies for the Educationally Disadvantaged. New York: Committee for Economic Development, 1987.

19 Ibid.

20 Burreta-Clement, John R. and Schweinhart, L., Barnett, W., Epstein, A., and Weinbart, D. Changed Lives: Effects of the Perry Preschool Programs on Youths Through age 19. Ypsilanti, Michigan: High/Scope Educational Research Foundation, 1984, p. 32.

21 Ibid.

22 Committee for Economic Development. Children In Need: Intervention Strategies for the Educationally Disadvantaged. New York: Committee for Economic Development, 1987, p. 23.

23 Interview with Caroline Gaston, Principal, New Futures School, Albuquerque, New Mexico, in Frank F. Furstenberg, Jr., Unplanned Parenthood. New York: Free Press, 1976.

24 California Department of Health Services, Vital Statistics Section, telephone interview as reported in Assembly Office of Research, California 2000: A People in Transition. Sacramento: 1986.

25 Okon, Laurie. Push Out, Stay Out: A Report on California's Public School Dropouts. Oakland: Oakland Citizens Center, 1982, p. 23.

26 California Department of Health Services, Vital Statistics Section, telephone interview as reported in Assembly Office of Research, California 2000: A People in Transition. Sacramento: 1986.

27 Hamburg, David A. Reducing the Casualties of Early Life: A Preventive Orientation. New York: Carnegie Corporation of New York, 1985, p. 6.

28 Committee for Economic Development. Children In Need: Intervention Strategies for the Educationally Disadvantaged. New York: Committee for Economic Development, 1987, p. 23.

29 Ibid.

30 California Department of Health Services, Vital Statistics Section, telephone interview as reported in Assembly Office of Research, California 2000: A People in Transition. Sacramento: 1986, p. 3.

31 Guthrie, James W., and Kirst, Michael. Conditions in Education in California, 1986-87. Berkeley: Policy Analysis for California Education, University of California, 1986, p. 26.

32 Ibid.

33 Ibid.

34 Burton, Louise F., and Wojciahowski, Thomas J. "Trends in Transition Training," Working Together. Summer Edition. Rohnert Park, California: California Institute on Human Services, Sonoma State University, 1988.

35 California Department of Finance, Special Tape File. U.S. Congress Select Committee on Aging. Housing the Elderly: Present Problems and Future Considerations. Washington, D.C.: July 1981.

36 Ibid.

37 "America In Perspective," Oxford Analytica. Boston: Houghton Mifflin Company, 1986, p. 32.

38 Sanders, Nancy, Stone, Nancy, LaFollette, Jim. Paths Through High School: A California Curriculum Study. Sacramento: California State Department of Education, 1987.

39 Shankar, Albert. New York Times. July 17, 1987.

40 Edmunds, Ronald. Characteristics of Effective Schools. Presentation to Education Commission of the States, 1982.

41 Carkhuff, Robert R. Toward Actualizing Human Potential. Amherst, Mass: Human Resources Development Press, 1981.

42 California Department of Education, California Basic Data System (CBEDS), Enrollment Data: California Elementary and Secondary Public Schools 1987-88.

43 California Department of Education (CBEDS), Racial and Ethnic Distribution of Staff and Students in California Public Schools 1987-88.

44 California Department of Education, Language Census Report 1987, Sacramento: Superintendent of Public Instruction, 1988.

45 National Education Association, Ranking of the States, 1985-86, New York.

46 Ibid.

47 California Department of Education (CBEDS), Racial and Ethnic Distribution of Staff and Students in California Public Schools 1987-88.

48 California Department of Education, Education Demographics Unit, Average Class Size in Selected Secondary Courses in California Public High Schools, Data Sheet, October 1988.

49 College Board, Educational Testing Service Report, 1988.

50 California Department of Education, California Assessment Program Office, Telephone Interview, 1989.

51 California Department of Education, Performance Report for California Schools, 1987-88.

52 Catterall, James S. On the Social Costs of Dropping Out of School, The University of North Carolina Press, 1987.

53 Pang, S.S., Takai, R.T., and Fetters, W.B. "High School Dropouts; Preliminary results from the High School and Beyond Survey." Paper presented at the 1984 annual meeting of the American Educational Research Association, 1983.

54 Levin, H.M. "The Costs to the Nation of Inadequate Education." Report to the Select Committee on Equal Education Opportunity, January 1978.

55 Steinberg, L., Blinde, P.L., and Chan, K.S. "Dropping Out Among Language Minority Youth: A Review of the Literature." Review of Educational Research, 54, (1), Spring, 1984, pp. 113-182.

56 California Department of Education, Program Evaluation and Research Division Informational Sheet: Number of Dropouts in California Public Schools by Grade Level, Sex and Ethnic Group, 1986-87.

57 Rumberger, Russell, W. "High School Dropouts: A Review of Issues and Evidence," Review of Educational Research, Volume 57, (2), Summer, 1987, pp. 101-121.

58 California Department of Education, Program Evaluation and Research Division, Performance Report for California Schools, 1987 and 1988.

59 Ekstrom, R.C., Goertz, M.E., Pollack, J.M., and Rock, D.A. "Who Drops Out of High School and Why?" Findings from a national study. Teachers College Record, 87, 1986, pp. 356-373.

60 Grant, C.A. and Sleeter, C.E. "Race, class and gender in education research: An argument for an integrative analysis". Review of Education Research, 56, 1986, pp. 195-211.

61 California Department of Education, Performance Report for California Schools, 1987.

62 California Department of Education, Career-Vocational Preparation Division, Fiscal Services, Telephone Interview, January, 1989.

63 Bishop, John. Vocational Education for At-Risk Youth: How Can It Be Made More Effective? Cornell University Working Paper #88-11, 1988.

64 Weber, Jim M. The Role of Vocational Education in Decreasing the Dropout Rate, Columbus, Ohio: The National Center for Research in Vocational Education, Ohio State University, 1982.

65 Bishop, John. Vocational Education for At-Risk Youth: How Can It Be Made More Effective?

66 Meyer, R. "Job Training in the Schools", Job Training for Youth, edited by R. Taylor, H. Rose, and F. Pratzen. Columbus: The National Center for Research in Vocational Education, Ohio State University, 1982.

67 Rumberger, R. Wand, Daymont, T.N., "The Impact of High School Curriculum on the Earnings and Employability of Youth," Job Training for Youth, edited by R. Taylor, H. Rosen, and F. Pratzen. Columbus: The National Center for Research in Vocational Education, Ohio State University, 1982.

68 Will, Madeline. Educating Students With Learning Problems: A Shared Responsibility. Washington, D.C.: U.S. Department of Education, 1986.

69 Ibid.

70 Institute for the Study of Family, Work and Community, Improving the Options of Handicapped Students in Mainstream Vocational Education. Berkeley: 1987.

71 Dayton, Charles, Reller, Dorothy, and Evans, John, Penninsula Academies Replications: 1985-86 Evaluation Report. Berkeley: Policy Analysis for California Educators, University of California, 1987.

72 Carvell Education Management Planning, Inc. Summative Evaluation of the Second Operational Year (1987-88) of the Project: Educational Excellence Through Career/Vocational Preparation. Chula Vista, California: Carvell Education Management Planning, Inc., 1988.

73 Zittel, Gail, "WorkAbility Works," Working Together. Fall Edition, Rohnert Park, California: California Institute on Human Services, Sonoma State University, 1983. ALSO SEE: McCormick, William, WorkAbility Today, An Evaluation Perspective. Sacramento, California: 1984.

74 Eberhard, Ray, "Combatting the Dropout Problem," Working Together. Fall Edition. Rohnert Park, California: California Institute on Human Services, Sonoma State University, 1986.